FIRE PREVENTION STANDARDS

OBJECTIVE

To insure that installers and inspectors understand he procedures inspections, and tests associated with fire sprinkler supply piping and system piping.

PROCEDURES

A. Underground Supply Piping

1. Underground installation contractors shall submit a schematic drawing showing part by part installation arrangement of underground appurtenances, including a parts list with UL listing #'s. These part numbers will be checked upon the piping inspections.

2. The underground piping inspection will include checking for sand bedding, trace wire, thrust blocks, and mastic coating of bolts.

3. The underground piping hydrostatic test shall be performed in accordance with NFPA 24 and the following: Hydrostatic tests shall be made before the joints are covered so that any leaks may be readily detected. Thrust blocks shall be sufficiently hardened before hydrostatic testing is begun. Center loading of the pipe shall be compacted to sufficiently hold the pipe in place during the tests. The pipeline shall be prepared 24 hours prior to testing by filling it with water, in a manner to remove all air. Air shall be bleed at the highest point of the line during the 24 hours prior to the test and pipe refilled with water. Hydrostatic test are non pneumatic tests, all air shall be removed. A pretest pressure of 50 psi shall be applied to stabilized the system. This should minimize losses due to entrapped air, changes in water temperature, distention of components under pressure, movement of gaskets, and absorption of air by the water and water by the pipe wall.

The test procedure shall proceed as follows: First bleed the air. The water pressure is to be increased in 50 psi increments until the test pressure of 200 psi is attained. After each increase in pressure, observations are to be made of the stability of the joints. These observations are to include such items as protrusion or extrusion of the gasket, leakage, or other factors likely to affect the continued use of a pipe in service. During the test, the pressure is not to be increased by the next increment until the joint has become stable. This applies particularly to movement of the gasket. After the pressure has been increased to the required maximum value and held for one hour, the pressure is to be decreased to 0 psi while observations are made for leakage. The pressure is again to be slowly increased to 200 psi and held for one more hour while observations are made for leakage. The fire department inspector shall be contacted at least 48 hours prior to this portion of the test to allow witness of this test.

To perform this test it is expected that a blind flange or skillet be used to prevent leaking past valves or possible valve damage.

4. Flushing shall take place after the hydrostatic test. A full diameter flush shall be made from all sprinkler underground. A full diameter flush shall be made from all hydrant lines or flush shall be made from 41/2" discharge.

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Mike Dobson, Fire Marshal